

**18 FEBRUARY 2003**



***Safety***

***C-5 DEFENSIVE SYSTEM (DS) FLARE  
HANDLING, LOADING AND DOWNLOADING  
PROCEDURES***

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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OPR: 60 AMW/SEW (MSgt Philip Morales)  
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This instruction implements AFD 91-2, *Safety Programs*. It establishes specific guidance for Defensive System /Snowstorm modified C-5 aircraft. This instruction is applicable to wing agencies with operations involving C-5 aircraft modified with the AN/ALE - 47 Countermeasure Dispensing System (CMDS) or associated munitions on Travis AFB.

***SUMMARY OF REVISIONS***

Changes organization names and office symbols throughout text. Restricts flare-loaded aircraft parking in paragraph 3.4. Clarifies and updates flare loading procedures in paragraph 8.5., and clarifies flare download procedures in paragraph 9. **A bar ( | ) indicates a change since the last edition.**

**1. General.**

1.1. The procedures outlined below in conjunction with any specific squadron operating instructions must be followed to ensure CMDS munitions and munitions loaded C-5 aircraft are handled safely and expeditiously. The CMDS uses Hazard Class and Division 1.3 munitions which require special handling and coordination by all organizations involved. Any recommended changes or additions to this instruction must be coordinated through the following agencies of responsibility prior to the Office of Primary Responsibility (OPR): 60th Air Mobility Wing, 60th AMW Command Post, 60th Maintenance Group, 60th Aircraft Maintenance Squadron, 60th Equipment Maintenance Squadron, 60th Component Maintenance Squadron, 60th Operations Group, 60th Operational Support Squadron, 60th Mission Support Group, 60th Civil Engineering Squadron Explosive Ordnance Disposal (EOD) and Fire Protection Flights.

**2. Training Requirements.**

2.1. 60th Component Maintenance Squadron Electronic Countermeasures Section (60th CMS/MXMV) has primary responsibility for providing initial flare load training and certification to personnel. Re-certification of qualified personnel includes annual classroom instruction and practical demonstration. 60 AMXS will maintain a listing of qualified loaders tracked in the G081 computer system. 60 AMXS training sections will update the G081 with the completed AF Form 2426's, **Training Request and Completion Notification**. Explosive Ordnance Disposal (EOD), and Air Mobility Operations Group (AMOG) will maintain documentation of training completion for their respective personnel.

### 3. Parking Restrictions.

3.1. The MJU-10/B flares loaded in the visor become forward firing ordnance when the visor is open.

3.1.1. Non-essential personnel/equipment standing, stopping, or parking directly in front of aircraft with visor open will be limited to no closer than 100 feet.

3.2. Flare loaded aircraft will be downloaded prior to entering maintenance hangars.

3.3. Aircraft parked on spots adjacent (left or right of aircraft) to flare loading/downloading operations will not run engines, be serviced with liquid oxygen, or fueled/defueled.

3.4. Flare loading and unloading operations will not be accomplished, nor flare loaded aircraft parked, at any time in the following locations:

3.4.1. Aircraft Maintenance Hangars.

3.4.2. Aircraft spots, 522, 301, 302, 718 and 719.

### 4. Fire Protection.

4.1. Posting fire symbols.

4.1.1. Two fire symbol three (3) placards will be posted at each flare loaded aircraft. Fire symbol placards will be located at the nose and tail of the aircraft.

4.1.2. 60th Maintenance Operation Center (MOC) will notify the Fire Protection flight when each aircraft is loaded or unloaded. Give aircraft tail number and parking location.

### 5. Aircraft Emergency with Flares Onboard.

5.1. The minimum withdrawal distance for personnel and equipment if flares are involved or suspected to be involved in fire is 600 feet.

5.1.1. Once an aircraft emergency is declared, the Control Tower will activate the primary crash net. Normal emergency response procedures will be followed.

5.2. MOC will notify MXG Safety, MOC 1 and the 60 AMXS Pro Super of the presence of flares and the number remaining (if known).

5.3. If the emergency is terminated and there is no damage to the flare system nor any possibility of interaction with the flare system the aircraft may continue to parking. If there is damage to the flare system or possibility of adverse effects to the flare system the aircraft will be parked in a designated "Hot Gun" area identified in TAFBI 13-101, *Aerodrome Procedures and Air Traffic Control*. Dam-

aged or hung flares will be saved and downloaded by appropriate EOD and flare download personnel prior to parking on the main ramp.

5.4. Fire fighting procedures for MJU-10 Countermeasures Flares.

5.4.1. For fires involving pyrotechnics and magnesium incendiaries, do not use halon, carbon dioxide or water type fire extinguishers on or near CMDS munitions.

5.4.2. It is acceptable for firefighters to use a water stream to move an ignited flare away from threatened aircraft or facilities.

**6. Flare Load Coordination.**

6.1. Tanker Airlift Control Center (TACC) will notify 60 OSS/OSO of Defensive System tasking for Travis AFB.

6.2. 60 OSS/OSO will notify 60 MOS/MXOOS of the Defensive System tasking.

6.3. 60 MOS/MXOOS will plan and schedule the event, i.e., select aircraft tail number, coordinate aircraft availability, indicate configuration, schedule timeline, and establish requirements in daily/weekly flying schedules. 60 MOS/MXOOS is also responsible for notifying the following agencies and coordinating support plans:

6.3.1. 60 EMS/MXMW will assemble flares, load assembled flares into modules, and deliver loaded modules to the flightline for installation on the aircraft.

6.3.2. 60 AMXS will ensure authorized personnel are at the aircraft to sign for and load flares. 60 AMXS will also provide a current listing of personnel authorized to receipt for flares to 60 EMS/MXMW.

6.3.3. 60 CMS is responsible for CMDS maintenance, maintenance of flare dispensers, and flare load standardization training and certification.

**7. Flare Load Process.**

7.1. Flares will normally be loaded prior to loading cargo. 60 MOS/MXOOS will advise the MOC to accomplish the following actions:

7.1.1. Advise 60 AMXS and 60 EMS Production Superintendents, 60 CMS/MXMV, 60 EMS/MXMW, and the Fire Protection flight of the aircraft tail number, location, and the required flare load.

7.2. 60 AMXS will configure aircraft for flare loading requirements.

7.2.1. 60 AMXS will ensure the following support equipment is available and in place:

7.2.2. One B-1 stand.

7.2.3. Two manlifts or two B-2 stands.

7.2.4. NF-2 light cart (if necessary).

7.2.5. Two fire symbol placards.

7.3. Production supervisors will advise 60 AMXS flare load team when the flare pre-load/stray voltage checks can begin.

7.4. 60 AMXS flare load team will perform pre-load and stray voltage checks.

## 8. Flare Load Procedures.

8.1. Flare load procedures should normally be completed before a normal home station sequence of events (SOE) begins. Follow the SOE listed in [Attachment 2](#) of this instruction.

8.2. MOC will contact Fire Protection flight, EOD, 60 AMW Safety, MXG Safety and 60 EMS/MXMW in the event of a munitions mishap involving the CMDS. All nonessential personnel will be evacuated a minimum of 600 feet from the site.

8.3. 60 AMXS Flare Load Team will contact the Production Superintendent to notify MOC and request flare delivery approximately 60 minutes prior to up load.

8.4. 60 EMS/MXMW will deliver flares to designated aircraft parking location and have assets signed for by authorized personnel. 60 EMS/MXMW personnel will stand-by at the Munitions Storage Area until a successful upload is completed, or released by 60 EMS Production Super.

8.5. 60 AMXS will perform the flare load operation. MOC will notify the Fire Protection Flight of the location of the flare loading. The 60 AMXS Production Super will notify the 60 EMS Production Super whenever there is an aircraft tail swap so accountable records can be adjusted.

8.5.1. Flare load team will verify inventory IAW T.O. 1C-5A-33-1-2CL-2, *Checklist-Non-nuclear Munitions Loading Procedures, AN/ALE-40 (V) Countermeasures Dispenser System*. The flare load team will add an "INFO NOTE" in the aircraft AFTO Forms 781A, stating the number of flares loaded and the number of flares polled.

8.5.2. If the flare load inventory is fewer than 60, the flare load team will document the mis-polled flares. Contact 60 CMS/MXMV, electronic warfare personnel to verify proper system operation. If the system is working properly, request another load to be delivered from 60 EMS/MXMW, and reload the aircraft with the new flares.

8.5.3. While an upload or download is in progress, no personnel except the load team and Weapons Task Qualification Crew (WTQC) members evaluating upload or download procedures will be within 50 feet of the aircraft.

8.6. Upon completion of the upload, normal maintenance may continue on the aircraft providing that the CMDS is safe (power removed from CMDS, and master safety pin is installed). Refer to T.O.11A-1-33, *Handling and Maintenance of Explosives-Loaded Aircraft*.

## 9. Flare Download Procedures.

**CAUTION:** All flares downloaded after flight from any aircraft must be returned to the munitions storage area for a returned munitions inspection to confirm serviceability prior to uploading on another aircraft.

9.1. In the event of a hung flare or explosive incident/accident involving flares, MOC must immediately notify the Fire Protection flight, EOD, 60AMW Safety, MXG Safety and 60 EMS/MXMW.

9.2. MOC will notify the 60 AMXS and 60 EMS production supervisors, 60 EMS/MXMW and Fire Protection Flight one hour prior to flare download.

9.3. If the flare inventory is fewer than 60 (due to any combination of factors), and there is not an imminent mission scheduled, the aircraft must be downloaded and the flares turned over to 60 EMS/MXMW.

9.4. Flare load teams will notify the respective flightline expediter who will notify MOC when download is complete.

9.5. MOC will notify the Fire Protection flight that flares have been removed from the affected aircraft.

**10. Adopted Form:** AFTO Form 2426.

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Director of Wing Staff

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

T.O. 1C-5A-33-1-2CL-2, *Checklist- Non-nuclear Munitions Loading Procedures, AN/ALE-40 (V) Countermeasures Dispenser System*

T.O. 11A-1-33, *Handling and Maintenance of Explosives-Loaded Aircraft.*

T.O. 11A-1-46, *Fire Fighting Guidance, Transportation, and Storage Management Data*

T.O. 11A16-43-7, *Storage and Maintenance Procedures Flare, Infrared CM, MJU-10/B and Cartridge, Impulse, BBU-36/B and Simulator IR Flare, MJU-10(T-1)/B*

AFFPD 91-2, *Safety Programs*

AFI 21-101, *Aerospace Equipment Maintenance Management*

AFMAN 91-201, *Explosives Safety Standards*

AMC *Concept of Operations for Employing Defensive Systems (CONOPS)*

TAFBI 31-101, *Aerodrome Procedures and Air Traffic Control*

***Terms***

**DUD FLARE:**—An aircraft loaded flare which failed to function or fire where the ejection end shows NO EVIDENCE of flare material and the weather seal is INTACT. This flare is no more or less hazardous than a normal flare and can be down loaded using normal down load procedures.

**HUNG FLARE:**—An aircraft loaded flare which failed to function or fire where the ejection end shows EVIDENCE of flare material and the weather seal is DAMAGED or MISSING. This flare presents a more hazardous condition than a normal flare.

**Attachment 2****TRAVIS FLARELOADING SEQUENCE OF EVENTS**

PLI/FLT CONTROL SWITCH CHECK COMPLETE	15+30
FLARE PRE-LOAD AND STRAY VOLTAGE CHECK START	15+30
FLARE PRE-LOAD AND STRAY VOLTAGE CHECK COMPLETE	14+30
FLARE UPLOAD START	14+30
FLARE UPLOAD COMPLETE	09+00
CONFIGURATION PASSED	09+00
SPOTTED	08+00